Remarks

The applicant has carefully considered the official action dated December 8, 2010, and the art cited therein. By way of the foregoing amendments, claims 1, 8, 9, 18, 34, and 43 have been amended. It is respectfully submitted that all pending claims are in condition for allowance. Accordingly, favorable reconsideration of all pending claims and an indication of allowance of the same are respectfully requested.

Claim 54

Claim 54 has not been amended and, therefore, is addressed first. Claim 54 was rejected as allegedly unpatentable over Besson (Model Checking Security Properties of Control Flow Graphs), Larus (EEL: Machine-Independent Executable Editing), and Van Dyke (US 6,412,070). Claim 54 recites instrumenting machine code to provide information regarding entry and exit points of the conditional structures and modifying the machine code to include instructions to regulate data according to data management information and instructions to associate first data management information with a first subset of the data. The Office action argues that instrumenting is described on pages 2-3, section 2 of Besson. However, Besson does not teach or suggest instrumenting machine code. Rather, Besson describes constructing a control flow graph to analyze machine code, but does not mention instrumenting the machine code. The Office action does not argue that any other reference teaches such instrumenting. Accordingly, the rejection should be withdrawn for at least this reason.

As noted in the Office action, Besson does not teach or suggest modifying machine code to include instructions to associate first data management information with a first subset of data. However, the Office action cites Larus and Van Dyke to cure the deficiency. Larus describes the use of a control flow graph to observe, measure, or modify program behavior. Van Dyke describes a file system security approach for Windows. However, it is respectfully submitted that the rejection is deficient because it is unclear how the three references could be combined to arrive at the subject matter of the claim. The Office action argues that it would have been obvious to combine Larus with Besson and Van Dyke to "improve the performance of the system/application at runtime by without [sic] checking the data management information when encountering the data." However, the Office Action provides no explanation as to how adding supervisory data management to the machine code of a program would increase performance. The Office action argues that it would have been obvious to combine Van Dyke with Besson and Larus "because Van Dyke teaches a method to extending [sic] access control to resource in the system in different level [sic]." However, without the benefit of hindsight in view of the applicant's specification, it is not clear how adding Van Dyke to Besson and Larus would arrive at the claimed invention. There is no suggestion in any of the references that the access control entry system operated by the Windows operating system should be modified to perform security enforcement by inserting instructions in the machine code of an application. Van Dyke extends available access control. However, Van Dyke relates to extending the security restrictions beyond traditional rights such as read, write, create, and delete. (Van Dyke, Abstract). There is no suggestion

that the system of Van Dyke should or could be modified to include modifying machine code

to include instructions to regulate data or associate first data management information with a

first subset of data. Furthermore, the motivation noted by the Examiner would not cause one

to modify Van Dyke to modify machine code. Rather, the combination of Van Dyke and the

Besson/Larus combination would result in a system that provides extended security rights for

data as managed by an operating system like Windows. The applicant respectfully submits

that the argument that the combination of Van Dyke with Besson/Larus results in a method

that modifies machine code to insert instructions to regulate data according to data

management information is based on impermissible hindsight.

Accordingly, it is respectfully submitted that claim 54 and all claims depending

therefrom are patentable over the Besson/Larus/Van Dyke combination. Reconsideration and

allowance of claim 54 is respectfully submitted.

Claim 1

Claim 1 was rejected as allegedly unpatentable over Van Dyke and Larus. Claim 1

recites modifying machine code to include instructions to associate first data management

information with a first addressable unit of a file and to associate second data management

information with a second addressable unit of the file. There is no teaching or suggestion in

either of Van Dyke or Larus to associate data management information with addressable units

of files. Van Dyke describes providing access control for computing objects "such as

network servers, stored data files, E-mail gateways, domains, registry keys, Active directory

objects, system events and even semaphores used by operating system." (Van Dyke, col. 5,

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lines 3-7). However, there is no teaching or suggestion that the access control could or

should associate data management information with addressable units of a file. Van Dyke

processes security for entire objects and provides no facility for handling security for

individually addressable units of a file (e.g., each byte of a file). There is no suggestion in

Van Dyke that an object is an addressable unit of a file. In particular, col. 12 lines 1-37

(argued in the Office action to describe associating data management information) describe

associating data management information with objects but does not teach or suggest

associating data management information with the addressable units of a file. Furthermore,

there is no suggestion in Van Dyke that adding such a level of security is desirable. Larus

cannot cure the deficiencies of Van Dyke. Larus describes the use of a control flow graph to

observe, measure, or modify program behavior. Larus does not teach or suggest associating

first data management information with a first addressable unit of a file and second data

management information with a second addressable unit of the file. Accordingly, claim 1 and

all claims depending therefrom are patentable over Van Dyke and Larus and reconsideration

is respectfully requested.

Claim 18

Claim 18 was rejected as unpatentable over Van Dyke and Larus. Claim 18 recites,

inter alia, instructions to associate first data management information with a first addressable

unit of a file and second data management information with a second addressable unit of the

file and to verify that the data management information indicates that first addressable unit is

authorized to be written by an instruction to write the data before the first addressable unit is

written. The Van Dyke/Larus combination does not teach or suggest such a computing platform. Accordingly, it is respectfully submitted that claim 18 and all claims depending therefrom are patentable.

Claim 34

Claim 34 was rejected as unpatentable over Van Dyke and Larus. Claim 34 recites, *inter alia*, instructions to associate first data management information with a first addressable unit of a file, to associate second data management information with a second addressable unit of the file, and to verify that the data management information indicates that the first addressable unit is authorized to be written by an instruction to write the first addressable unit before the first addressable unit is written. The Van Dyke/Larus combination does not teach or suggest such a method. Accordingly, it is respectfully submitted that claim 34 and all claims depending therefrom are patentable.

Claim 43

Claim 43 was rejected as unpatentable over Van Dyke and Larus. Claim 43 recites, *inter alia*, instructions to associate first data management information with a first addressable unit of a file, instructions to associate second data management information with a second addressable unit of the file, and instructions to verify that the data management information indicates that the first addressable unit is authorized to be written by an instruction to write the first addressable unit before the first addressable unit is written. The Van Dyke/Larus combination does not teach or suggest such an apparatus. Accordingly, it is respectfully submitted that claim 43 and all claims depending therefrom are patentable.

Conclusion

In general, the Official action makes various statements regarding the pending claims and the cited references that are now moot in light of the above. Thus, the applicant will not address such statements at the present time. However, the applicant expressly reserves the right to challenge such statements in the future should the need arise (e.g., if such statement should become relevant by appearing in a rejection of any current or future claim).

Before closing, the applicants note that at least some of the amendments are either broadening or clarifying and, thus, not necessary for patentability. Consequently, these broadening or clarifying amendments do not give rise to prosecution history estoppel or limit the scope of equivalents of the claims under the doctrine of equivalents.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 08-2025 and please credit any excess fees to such deposit account.

If the Examiner is of the opinion that a telephone conference would expedite the

prosecution of this case, the Examiner is invited to contact the undersigned at the number

identified below.

Respectfully submitted,

Dated: March 8, 2011

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